

**REMARKS****Status of the Claims**

Claims 1-5, 8-12, and 15-19 are currently present in the Application, and claims 1, 8, and 15 are independent claims. Claims 1-2, 4-5, 8-9, 11-12, 15-16, and 18-19 have been amended, claims 6-7, 13-14, and 20 have been cancelled, and no claims have been added.

**Examiner Interview**

Applicants note with appreciation the telephonic interview conducted between Applicants' representative and the Examiner on August 15, 2006. During the telephonic interview, the Examiner and Applicants' representative discussed the 112 and 101 rejections. In particular, Applicants' representative and the Examiner discussed support for Applicants' claim limitations in Applicants' specification, and also discussed possible amendments to Applicants' claims using language found in Applicants' specification. No agreement was reached regarding the claims.

**Drawings**

Applicants note with appreciation the Examiner's acceptance of Applicants' formal drawings filed March 29, 2006.

**Specification**

Applicants note with appreciation the removal of the objections to the specification in view of the specification amendments filed March 29, 2006.

**Claim Objections Under 35 U.S.C. § 112, First Paragraph**

Claims 1-20 stand rejected under 35 U.S.C. § 112, first paragraph, because the specification, while being enabling for assessing the accuracy of a sample of household data, does not reasonably provide enablement for "comparing" or "matching" sample household records to reference file records in order to determine the "balance" of sample data or calculate a "bias value of sample records." The Office Action states that

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the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims. Applicants respectfully traverse these rejections. Claims 6-7, 13-14, and 20 have been canceled in this response and, therefore, rejections to these claims are moot.

Applicants have amended Applicants' claims to further define Applicants' invention based upon Applicants' specification and, therefore, no new matter is added. As discussed below, Applicants' amended claims, along with language found in Applicants' specification, overcome the 112, first paragraph rejections to claims 1-5, 8-12, and 15-19.

The Office Action asserts that the scope of Applicants' "reference file" is unclear. Applicants clearly define Applicants' "reference file" at various locations within the specification, two of which are:

"The reference file includes a large population of households in which phone calls or mailings have been made recently to the households to ensure data accuracy. The reference file is presumed to be accurate because the data it contains is self-reported by the households." (page 5, lines 9-14)

and

"Population 100 includes a population in a large geographical area. For example, population 100 may represent households within the United States. Reference File 120 is a subset of population 100, and includes a large population of households with demographic data presumed to be accurate. For example, Reference File 120 may include households in urban areas." (page 9, lines 9-15)

As can be seen from the above excerpts, the specification states that a reference file is a subset of a population and includes a large population of households with demographic data presumed to be accurate because the data it contains is self-reported by the households. Applicants contend that one skilled in the art would understand the

meaning of Applicants' reference file by viewing the above excerpts included in Applicants' specification and, therefore, the scope of Applicants' "reference file" is clear.

The Office Action asserts that "the recitation of generic, unidentified comparison means to evaluate whether the data source is balanced does not convey the specifics of what the comparison means encompasses." Applicants' specification states:

"The source file and is sent to a consumer appending vendor to **match by name and address**, then to append demographic data." (page 5, lines 21-23, emphasis added)

and

"Data providers often use the term "data quality" to describe data accuracy. Data quality is further described in terms of **Overall Match Rate**, **Elemental Match Rates**, and Accuracy... Overall Match Rate refers to the number of records being received from the data provider with respect to the number being submitted for enhancement. The Overall Match rate is determined by matches on last name and address... Elemental Match Rates refer to the number of elements requested for each record versus the total number of elements appended to a file. An element is a unit of data, a "demographic data field," such as age of householder, household income, whether a household owns or rents property, etc. One record will have many elements, one for each demographic field potentially appended." (page 2, line 11 - page 3, line 10, emphasis added).

As such, Applicants convey, in Applicants' specification, specifics of what the comparison means encompasses. To distinctly claim such comparison means, Applicants have amended Applicants' independent claims' comparison limitation to include "*comparing a name and address included in each of the sample quantity of household records to the plurality of reference file household records, the comparing resulting in matched household records.*" Therefore, Applicants' independent claims as amended convey the specifics of what the comparison means encompasses. No new matter has been added with such amendment because such limitation is included in Applicants' original specification as discussed above.

The Office Action asserts that "the degree to which data is considered to be "balanced" has not been set forth. Applicants' specification states:

"The customer source file sample is matched against reference file 425 (step 420) to determine how many households from the sampled source file are in the reference file. A determination is made as to whether the sample is balanced (decision 430). A balanced sample properly represents the households being analyzed. For example, if the analysis is based on the United States population, the sample is balanced if it represents the United States population. " (page 13, line 27 - page 14, line 4, emphasis added)

As can be seen from the above excerpt, Applicants provide a description of the term "balanced," as well as an example in Applicants' specification. Therefore, Applicants contend that one skilled in the art would understand the meaning of Applicants' "balanced" limitation by viewing the above excerpt included in Applicants' specification.

The Office Action asserts that "the degree to which data is considered to be a match has not been set forth" and "without a basis to ascertain whether sample data "matches" reference file data, one of ordinary skill in the art would not be enabled to calculate a bias value." Applicants assume these statements are directed to Applicants' claims 4, 5, and corresponding information handling and computer program product claims.

Applicants clearly define embodiments for matching household records and calculating a bias values in Applicants' Figures 7, 8, 9, and corresponding text. Some of Applicants' descriptions include:

"A determination is made as to whether the test file element matches or is approximately equal to the reference file element (decision 720). Certain data fields are allowed to be approximate and not match completely. For example, if the data field being analyzed is income, the business rules might be included to count it as a match if the test file data field is within \$10,000." (page 16, lines 20-26)

and

"Data element processing commences at 800, whereupon a determination is made as to whether the data element being analyzed is non-categorical (decision 810). For example, the age of the head-of-household may be a numeric and non-categorical field, where the marital status may be a categorical field. If the data element is non-categorical, decision 810 branches to "Yes" branch 815 whereupon the average difference between the test file elements that are analyzed and reference file element are calculated (step 820). The mean difference of the test file result is calculated at step 830. On the other hand, if the data element is categorical, decision 810 branches to "No" branch 835 whereupon the percentage of records with exact match is calculated (step 840). A determination is made as to whether the data element is ordinal (decision 850). For example, a data element is ordinal if it includes numbers that have meaning in terms of order, but their differences or ratios are not meaningful. If the data element has values related numerically, decision 850 branches to "Yes" branch 855 whereupon the percentage of records with close match is calculated (step 860). For example, the analyst may want to have the household income level data element related numerically so that if the test file element value is close to the reference file value (e.g., one ordinal level off), it is counted as a match. On the other hand, if the data element is not ordinal, decision 850 branches to "No" branch whereupon test file element distributions are calculated using chi-square analysis (step 870) and processing returns at 880." (page 18, lines 1-29)

and

"Chi-square analysis is performed on No Match bin 935 and Match Bin 942 to determine the extent of the source file bias (step 960). For example, the chi-square analysis may statistically show that the source file matched records for households with children much better than for households without children. The extent of the source file bias is calculated (step 965) and a separate model is developed for households with a certain bias level (step 975). The bias

level threshold may be determined by the analyst and may be changed for different circumstances. For example, a customer may be interested in one Data Field, but not interested in another." (page 19, lines 18-30)

Applicants have amended claim 4 to distinctly claim that "elements" are matched between the comparison master file household records and the reference file records, and have also amended claim 5 to distinctly claim that elements are matched between the second data source household records and the reference file records. Therefore, in light of Applicants' claim amendments and Applicants' specification, Applicants set forth the degree to which data is considered to be a match and enable one of ordinary skill to calculate a bias value.

In light of the above discussion and amendments to Applicants' claims, Applicants request the removal of the 112, first paragraph, rejections to claims 1-5, 8-12, and 15-19.

#### **Claim Objections Under 35 U.S.C. § 112, Second Paragraph**

Claims 3, 10, and 17 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Office Action asserts that Applicants' "approximates" term is not defined by the claim and the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Applicants traverse this rejection.

Applicants claim "*retrieving a rule corresponding to an element in the data source,*" and "*determining whether the element in the data source approximates a corresponding value in the reference file based on the retrieved rule.*" In addition, Applicants' specification states:

"A determination is made as to whether the test file element matches or is approximately equal to the reference file

element (decision 720). Certain data fields are allowed to be approximate and not match completely. For example, if the data field being analyzed is income, the business rules might be included to count it as a match if the test file data field is within \$10,000. If the test file element does not match or is not approximate to the reference file element, decision 720 branches to "No" branch 725 whereupon a "no match" is returned." (page 16, lines 20-29)

As can be seen from the excerpt above and Applicants' claim limitation, Applicants' "approximates" limitation is based upon a retrieved reference rule and, therefore, Applicants provide a standard for ascertaining the requisite degree of approximation, which is the reference rule. As such, one of ordinary skill in the art is reasonably apprised of the scope of the invention.

In light of the above discussion and amendments to Applicants' claims, Applicants request the removal of the 112, second paragraph, rejections to claims 3, 10, and 17.

#### **Claim Objections Under 35 U.S.C. § 101**

Claims 1-20 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. The Office Action asserts that Applicants' claim 1 does not produce a useful, concrete, and tangible result. Applicants traverse these rejections. Claims 6-7, 13-14, and 20 have been canceled in this response and, therefore, rejections to these claims are moot.

#### **USEFUL RESULT**

Regarding a useful result, Applicants have amended claim 1 to yield a result that is specific, substantial, and credible, wherein the result is the selection of a data source vendor based upon analyzing the data source. The Office Action also asserts that the recitation of generic, unidentified comparison means to evaluate whether the data source is balanced is not deemed to be specific, substantial, and credible because the claimed invention does not convey the specifics of what the comparison means

encompasses. As discussed above, Applicants have amended Applicants' independent claims to include the comparison means limitation of comparing "a name and address" and, therefore, Applicants claim an identified comparison means.

The Office Action asserts that the generation of a comparison master file based on matching of records from a sample quantity to a reference file does not convey the specifics of the methodology used in said matching step. As discussed above, Applicants have amended claim 2 to clearly claim the specifics of the methodology used in the generation of the comparison master file, which is to match names and addresses of the new source file sample quantity to names and addresses of the reference file records.

The Office Action also asserts that bias values are calculated based upon the matching of sample records with the reference records, but are not presented as being used in order to effect a decision regarding the quality of the data sample, and thus are not deemed to have any useful result and "In lieu of specific criterion for the definition of "matching," the resulting bias values calculated would thereby also lack usefulness, further rendering the practice of the claimed invention dependent on the person practicing the invention. Applicants' claims 4 and 5 include limitations of

- calculating a first bias value based upon matching one or more elements of household records included in the comparison master file to one or more elements included in the reference file records. (claim 4)
- calculating a second bias value based upon matching one or more elements of household records from a second data source to one or more of the reference file records; and **wherein the selecting includes comparing the first bias value to the second bias value.** (claim 5)

As can be seen, Applicants use the bias values in the selection of the data source vendor, which is a useful result. In addition, as discussed above, Applicants define a specific criterion for Applicants' "matching" limitation.

**CONCRETE RESULT**

Regarding a concrete result, the Office Action asserts that the claimed invention does not yield a result that is substantially repeatable because the claimed invention does not convey the specifics of the comparison of data, or criterion for evaluation whether the sample data is "balanced," "matches," or "approximates" reference data. In light of the above discussions and claim amendments, Applicants contend that Applicants' invention produces a concrete result.

**TANGIBLE RESULT**

Regarding a tangible result, Applicants have amended claim 1 to include a generating, an analyzing, a selecting, and a providing limitation, each of which are supported in Applicants' specification and, therefore, no new matter is added. As such, Applicants' invention provides selection of a data source vendor to a user, which is a tangible result.

The Office Action asserts that the household data recited in claims 1-5, 8-12, and 15-19 are only found in the non-functional descriptive material and are not functionally involved in the steps recited nor do they alter the recited structural elements. Applicants assume that the Office Action is referring to Applicants' "household records" limitation.

Applicants' amended claim 1 includes the limitation of "*comparing a name and address included in each of the sample quantity of household records...*" and, therefore, Applicants' "household records" includes a name and address, which is functional descriptive material and functionally involved in Applicants' "comparing" limitation.

In light of the above discussion and amendments to Applicants' claims, Applicants request the removal of the 101 rejections to claims 1-5, 8-12, and 15-19.

**Conclusion**

As a result of the foregoing, it is asserted by Applicants that the remaining claims in the Application are in condition for allowance, and Applicants respectfully request an early allowance of such claims.

Applicants respectfully request that the Examiner contact the Applicants' attorney listed below if the Examiner believes that such a discussion would be helpful in resolving any remaining questions or issues related to this Application.

Respectfully submitted,

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